

Sensor Area Network for Integrated Systems Health Management, Phase I

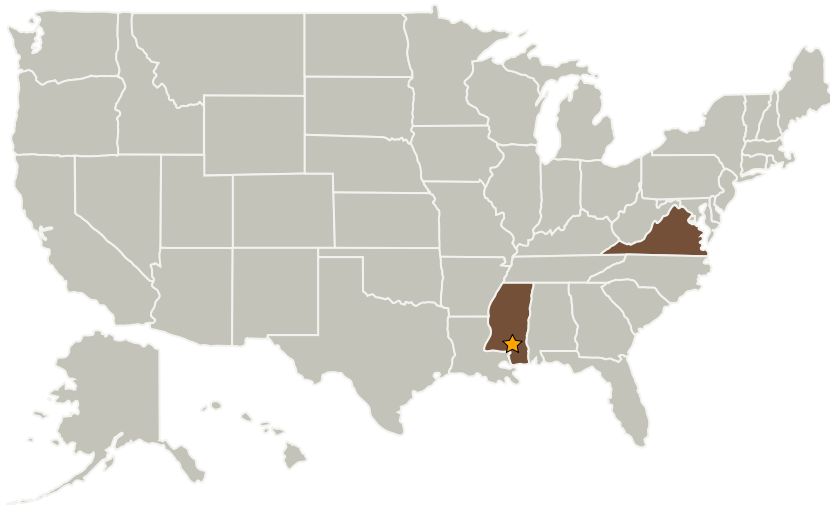
Completed Technology Project (2008 - 2008)



Project Introduction

The term Integrated Systems Health Management (ISHM) is used to describe a capability that focuses on determining the condition of every element in a complex System (detect anomalies, diagnose causes, prognosis of future anomalies) to provide data, information, and knowledge (DIaK) to control systems for safe and effective operation. ISHM capability is achieved by integrating data, information, and knowledge (DIaK) that might be distributed throughout the system elements (which inherently implies capability to manage DIaK associated with distributed sub-systems). DIaK must be available to any element of a system at the right time and within the proper context. ISHM capability is measured by how well a system performs the following functions: Detect anomalies; Diagnose causes; Predict future anomalies/failures; and Provide the user with an integrated awareness about the condition of every element in the system and guide user decisions. Mobitrum proposes to develop a Sensor Area Network (SAN) for ISHM to bring the distributed intelligences together across all elements within ISHM system with effective communication mechanisms using distributed and/or hierarchical architectures to deliver intelligence across all elements.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Stennis Space Center (SSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Stennis Space Center(SSC)	Lead Organization	NASA Center	Stennis Space Center, Mississippi
Mobitrum Corporation	Supporting Organization	Industry	McLean, Virginia

Primary U.S. Work Locations	
Mississippi	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Ray Wang

Technology Areas

Primary:

- TX13 Ground, Test, and Surface Systems
 - └ TX13.3 Assembly, Integration and Launch
 - └ TX13.3.1 Offline Element Processing